

APPENDIX

A

THIS IS THE GENERAL LIST OF ARCONIUM ALLOYS. CUSTOM ALLOYS/FORMULATIONS ARE AVAILABLE TO SUIT YOUR SPECIAL REQUIREMENTS.

Ostalloy Number	Temperature °F		Temperature °C		Alloy	Density lb. in. ⁻³ g. cm. ⁻³
	Solidus	Liquidus	Solidus	Liquidus		
51	51	E	51	10.7	E	10.7 62.5 Ga, 21.5 In, 16 Sn
60	60	E	60	15.7	E	15.7 75.5 Ga, 24.5 In
117	117	E	117	47	E	47 44.7 Bi, 22.6 Pb, 19.1 In 8.3 Sn, 5.3 Cd
129133	129		133	54		56 49.3 Bi, 20.8 In, 17.9 Pb, 11.5 Sn, .5 Cd
134149	134		149	57		65 47.5 Bi, 25.4 Pb, 12.6 Sn, 9.5 Cd, 5 In
136	136	E	136	58	E	58 49 Bi, 21 In, 18 Pb, 12 Sn
136156	136		156	58		69 49 Bi, 18 Pb, 18 In, 15 Sn
142149	142		149	61		65 48 Bi, 25.7 Pb, 12.7 Sn, 9.6 Cd, 4 In
143	143	E	143	61.5	E	61.5 61.72 In, 30.78 Bi, 7.5 Cd
156158	156		158	68		69 52 Bi, 26 Pb, 22 In
158	158	E	158	70	E	70 49.5 Bi, 27.3 Pb, 13.1 Sn, 10.1 Cd
158165A	158		165	70		73 50.5 Bi, 27.8 Pb, 12.4 Sn, 9.3 Cd
158173	158		173	70		78 50 Bi, 34.5 Pb, 9.3 Sn, 6.2 Cd
158194	158		194	70		90 42.5 Bi, 37.7 Pb, 11.3 Sn, 8.5 Cd
160190	160		190	71		88 42 Bi, 37 Pb, 12 Sn, 9 Cd
162	162	E	162	72	E	72 66.3 In, 33.7 Bi
165200	165		200	73		93 50 Bi, 39 Pb, 7 Cd, 4 Sn
170180	170		180	77		82 50 Bi, 39 Pb, 8 Cd, 3 Sn
171	171	E	171	77.5	E	77.5 48.5 Bi, 41.5 In, 10 Cd
178	178	E	178	81	E	81 54.1 Bi, 29.6 In, 16.3 Sn
178185	178		185	81		85 50.4 Bi, 39.2 Pb, 8 Cd, 1.4 In, 1 Sn
190200	190		200	87		93 51.45 Bi, 31.35 Pb, 15.2 Sn, 1 In
197	197	E	197	92	E	92 51.6 Bi, 40.2 Pb, 8.2 Cd
200	200	E	200	93	E	93 44 In, 42 Sn, 14 Cd
200210	200		210	93		99 50 Bi, 31 Pb, 19 Sn
202	202	E	202	95	E	95 52 Bi, 30 Pb, 18 Sn
203204	203		204	95		95.5 52 Bi, 32 Pb, 16 Sn
203219A	203		219	95		104 56 Bi, 22 Pb, 22 Sn
203219B	203		219	95		104 50 Bi, 30 Pb, 20 Sn
203219C	203		219	95		104 46.1 Bi, 19.7 Pb, 34.2 Sn
203239	203		239	95		115 50 Bi, 25 Pb, 25 Sn
203264	203		264	95		129 51.6 Bi, 37.4 Sn, 6 In, 5 Pb
203277	203		277	95		136 36 Bi, 32 Pb, 31 Sn, 1 Ag
205225	205		225	96		107 45 Bi, 35 Pb, 20 Sn
205271	205		271	96		133 34 Pb, 34 Sn, 32 Bi
208221	208		221	98		105 52.2 Bi, 37.8 Pb, 10 Sn
208234	208		234	98		112 51.6 Bi, 41.4 Pb, 7 Sn
212	212	E	212	100	E	100 35.7 Sn, 35.7 Bi, 28.6 Pb
215226	215		226	102		108 54.5 Bi, 39.5 Pb, 6 Sn
219	219	E	219	104	E	104 53.9 Bi, 25.9 Sn, 20.2 Cd
229	229	E	229	109	E	109 67 Bi, 33 In
242248	242		248	117		120 55 Bi, 44 Pb, 1 Sn
244	244	E	244	118	E	118 52 In, 48 Sn
244257	244		257	118		125 50 In, 50 Sn
244268	244		268	118		131 52 Sn, 48 In
244293	244		293	118		145 58 Sn, 42 In
248250	248		250	120		121 55 Bi, 44 Pb, 1 In
248266	248		266	120		130 40 In, 40 Sn, 20 Pb
248306	248		306	120		152 42 Pb, 37 Sn, 21 Bi

E = Eutectic

Ostalloy Number	Temperature °F Solidus	Temperature °C Solidus	Temperature °C Liquidus	Alloy	Density lb. in. ⁻³ g. cm. ⁻³
250277	250	277	121	136 55.1 Bi, 39.9 Sn, 5 Pb	.3130 8.67
253	253	E 253	123	E 123 74 In, 26 Cd	.2751 7.62
255	255	E 255	124	E 124 55.5 Bi, 44.5 Pb	.3769 10.44
255259	255	259	124	126 58 Bi, 42 Pb	.3754 10.40
257	MP	257	MP	125 70 In, 15 Sn, 9.6 Pb, 5.4 Cd	.2754 7.63
257302	257	302	125	150 95 In, 5 Bi	.2673 7.40
262269	262	269	128	132 75 In, 25 Sn	.2720 7.30
262271	262	271	128	133 56.84 Bi, 41.16 Sn, 2 Pb	.3105 8.60
266343	266	343	130	173 50 Pb, 30 Sn, 20 Bi	.3419 9.47
268338	268	338	131	170 51.5 Pb, 27 Sn, 21.5 Bi	.3458 9.58
268375	268	375	131	190 80 In, 20 Sn	.2710 7.30
270282	270	282	132	139 45 Sn, 32 Pb, 18 Cd, 5 Bi	.3115 8.63
275	MP	275	MP	135 57.4 Bi, 41.6 Sn, 1 Pb	.3097 8.58
281	281	E 281	138	E 138 58 Bi, 42 Sn	.3090 8.56
281299	281	299	138	148 50 Bi, 50 Sn	.2970 8.23
281333	281	333	138	167 43 Bi, 57 Sn	.2960 8.16
281338	281	338	138	170 60 Sn, 40 Bi	.2931 8.12
284324	284	324	140	162 48 Sn, 36 Pb, 16 Bi	.3170 8.78
291	291	E 291	144	E 144 60 Bi, 40 Cd	.3361 9.31
291295	291	295	144	163 90 In, 10 Sn	.2710 7.51
291325	291	325	144	163 43 Pb, 43 Sn, 14 Bi	.3245 8.99
293	293	E 293	145	E 145 51.2 Sn, 30.6 Pb, 18.2 Cd	.3050 8.45
293325	293	325	145	162 75 In, 25 Pb	.2830 7.84
296	296	E 296	146	E 146 97 In, 3 Ag	.2664 7.38
298300	298	300	148	149 80 In, 15 Pb, 5 Ag	.2834 7.85
307A	MP	307	MP	153 99.5 In, .5 Ga	.2639 7.31
307322	307	322	153	161 70 Sn, 18 Pb, 12 In	.2812 7.79
313	MP	313	MP	156.7 100 In	.2639 7.31
320345	320	345	160	174 70 In, 30 Pb	.2956 8.19
338	338	E 338	170	E 170 65.5 Sn, 31.5 Bi, 3.0 In	.2901 8.03
345365	345	365	174	185 60 In, 40 Pb	.3077 8.52
348	348	E 348	176	E 176 67.8 Sn, 32.2 Cd	.2772 7.68
355	355	E 355	179	E 179 62 Sn, 36 Pb, 2 Ag	.3036 8.41
355410	355	410	179	210 55 Pb, 44 Sn, 1 Ag	.3289 9.10
355450	355	450	179	232 60 Pb, 37 Sn, 3 Ag	.3390 9.39
355500	355	500	179	260 50 Sn, 47 Pb, 3 Ag	.3198 8.86
356408	356	408	180	209 50 In, 50 Pb	.3198 8.86
361	361	E 361	183	E 183 63 Sn, 37 Pb	.3032 8.40
361367	361	367	183	186 70 Sn, 30 Pb	.2946 8.16
361370	361	370	183	188 60 Sn, 40 Pb	.3068 8.50
361378	361	378	183	192 75 Sn, 25 Pb	.2888 8.00
361390	361	390	183	199 80 Sn, 20 Pb	.2834 7.85
361403	361	403	183	205 85 Sn, 15 Pb	.2780 7.70
361413	361	413	183	212 50 Sn, 50 Pb	.3202 8.87
361415	361	415	183	213 90 Sn, 10 Pb	.2726 7.55
361432	361	432	183	222 95 Sn, 5 Pb	.2679 7.42
361460	361	460	183	238 60 Pb, 40 Sn	.3350 9.28
361496	361	496	183	257 70 Pb, 30 Sn	.3509 9.72
361514	361	514	183	268 75 Pb, 25 Sn	.3595 9.96
380450	380	450	193	232 65 Pb, 35 In	.3420 9.47
383437	383	437	195	225 60 Pb, 40 In	.3350 9.30
390	390	E 390	199	E 199 91 Sn, 9 In	.2626 7.27
422	422	E 422	217	E 217 90 Sn, 10 Au	.2730 7.30

E = Eutectic

Ostalloy Number	Temperature °F				Temperature °C				Alloy	Density	
	Solidus	Liquides	Solidus	Liquides						lb. in ³	g. cm ⁻³
430	430	E	430	221	E	221	96.5	Sn, 3.5 Ag		.2657	7.36
430448	430		448	221		238	96	Sn, 4 Ag		.2640	7.31
430465	430		465	221		240	95	Sn, 5 Ag		.2668	7.39
430563	430		563	221		295	90	Sn, 10 Ag		.2711	7.51
450		MP	450		MP	232	100	Sn		.2628	7.28
450456	450		456	232		235	98	Sn, 2 Sb		.2690	7.45
450464	450		464	232		240	95	Sn, 5 Sb		.2617	7.25
451		MP	451		MP	233	65	Sn, 25 Ag, 10 Sb		.2818	7.80
463470	463		470	239		243	85	Pb, 10 Sb, 5 Sn		.3820	10.58
463545	463		545	239		285	92	Pb, 5 Sn, 3 Sb		.3906	10.82
482508	482		508	250		264	75	Pb, 25 In		.3599	9.97
486500	486		500	252		260	90	Pb, 10 Sb		.3826	10.60
514570	514		570	268		299	88	Pb, 10 Sn, 2 Ag		.3887	10.77
518536	518		536	270		280	81	Pb, 19 In		.3707	10.27
520		MP	520		MP	271	100	Bi		.3541	9.80
522603	522		603	273		316	96	Pb, 4 Sn		.3930	10.87
524564	524		564	274		296	95	Bi, 5 Sb		.3445	9.54
527576	527		576	275		302	90	Pb, 10 Sn		.3881	10.75
529553	529		553	277		290	85	Pb, 15 In		.3795	10.51
536	536	E	536	280	E	280	80	Au, 20 Sn		.5242	14.51
536558	536		558	280		292	90	Pb, 10 In		.3870	10.72
549565	549		565	287		296	92.5	Pb, 5 Sn, 2.5 Ag		.3978	11.02
554590	554		590	290		310	90	Pb, 5 In, 5 Ag		.3971	11.00
558		MP	558		MP	292	90	Pb, 5 Ag, 5 Sn		.3971	11.00
558598	558		598	292		314	95	Pb, 5 In		.3980	11.06
570580	570		580	299		304	95.5	Pb, 2.5 Ag, 2 Sn		.4043	11.20
572		MP	572		MP	300	92.5	Pb, 5 In, 2.5 Ag		.3978	11.02
579	579	E	579	303	E	303	97.5	Pb, 2.5 Ag		.4090	11.33
581687	581		687	305		364	95	Pb, 5 Ag		.4079	11.30
588	588	E	588	309	E	309	97.5	Pb, 1.5 Ag, 1 Sn		.4072	11.28
590598	590		598	310		314	95	Pb, 5 Sn		.3980	11.06
590611	590		611	310		322	98.5	Pb, 1.5 Sb		.4054	11.23
597		MP	597		MP	313	91	Pb, 4 Sn, 4 Ag, 1 In		.4060	11.24
620		MP	620		MP	327	100	Pb		.4090	11.35

E = Eutectic

MP = Melting Point